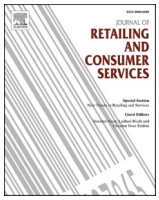
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Actions are more than just words: Relationships between word-of-mouth, personal interaction, and product attachment

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ABSTRACT

While the impact of word-of-mouth (WOM) on receivers is widely recognized, less is known about how participation in WOM affects purchase behavior. To address this literature gap, this study aims to empirically investigate the connection between customers' positive WOM intentions and their actual consumption behavior by considering frontline employees' personal interactions with customers and customers' global product attachment. Using data from 521 Chinese consumers in a retail shopping mall, we employed a hierarchical multiple regression model to test our hypotheses. Our findings reveal that, while the direct effect of positive WOM on actual behavior is not significant, customers' active interactions with frontline employees enhances the influence of their positive WOM intention on both a) purchase amount and b) visit frequency. Furthermore, we suggest that customers with high (versus low) attachment to global products heighten the positive interaction effect of positive WOM intention and frontline employees' personal interaction on purchase amounts only. Therefore, this study has implications for domestic and global retail companies to effectively manage customer WOM.

1. Introduction

Word-of-mouth (WOM), defined as an "oral or written communication process between a sender and receiver to share and acquire informal information" (Kim et al., 2024, p. 255), is widely accepted as a powerful marketing strategy strongly associated with firm performance. The following practical examples show the divergent ripple effects of WOM across various industries. Zappos is an online retailer that sells shoes and clothes, generating $2 billion in annual revenue through customers' positive WOM. Zappos prioritizes customer satisfaction as a business philosophy and invests its budget in fostering exceptional customer service instead of paid advertising. For example, the dedicated caring services of Zappos team members encouraged customers to make positive recommendations to others and repeat purchases (ReferralRock, 2022). By contrast, Johnson & Johnson, a global healthcare company, has faced more than 60,000 lawsuits from customers regarding safety issues associated with cancer-causing baby powder and other talc products. This negative scandal has been swiftly disseminated among customers, and the company has recently declared its intention to pay $8.9 billion for the settlement of tens of thousands of lawsuits (BBC News, 2023). This issue has led to significant financial losses and has undermined customer trust in the company.

In academia, the significance of WOM has been consistently examined across various consumption contexts. Previous retail research has focused on the antecedents of positive WOM, such as store image (Chebat et al., 2010), store atmosphere (Elmashhara and Soares, 2022), and shopping value (El Hedhli et al., 2016). Importantly, several studies have investigated WOM's advantages regarding firm growth, such as actual sales (Fan et al., 2021), quantity of product orders (Lohse and Kemper, 2019), and purchase choices (Flavián et al., 2016). Early investigators consistently summarized that customers' (as senders') voluntary and positive WOM toward a particular object (e.g., goods, service, seller) in the consumption process affects receivers' attitudes, behavioral intentions, and actual behavior toward that object, which mainly leads to higher firm performance by enhancing receivers' loyalty.

With the widespread adoption of Internet technology, WOM has expanded beyond traditional face-to-face communication to include e-

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WOM (electronic WOM), which directly or indirectly influences consumers' purchasing decisions. In recent years, scholars have shown a growing interest in senders' e-WOM because of its powerful communication capabilities on social media platforms, which foster receivers' confidence in transactions (Fang et al., 2023; Le et al., 2022). Several studies have revealed the impact of various forms of positive and negative online reviews from senders on receivers' purchase decisions (Chen et al., 2011; Fan et al., 2021; Kaushik et al., 2018; Le et al., 2022). In this context, consumers who have previously used a particular product or service become senders. The senders' subjective opinions serve as crucial decision-making aids, reducing receivers' perceived uncertainties and risks. Therefore, this approach is commonly used to evaluate the effectiveness of viral marketing by examining sender-receiver interactions within the same consumer groups. However, there is a lack of theoretical and managerial explanations to address the following question: *Do customers (as senders) with a positive WOM intention also exhibit consistent shopping behavior themselves?*

In this respect, we propose three primary limitations of the impact of positive WOM on actual consumption behavior in the extant research. First, although several scholars have demonstrated the decisive power of senders' favorable storytelling regarding receivers' choices (Flavián et al., 2016) and actual purchase decisions (Kim et al., 2024; Le et al., 2022), few have investigated how participation in WOM affects their shopping behavior as WOM senders (Fang et al., 2023). However, we observed that most early investigators measured the outcomes of WOM communication using behavioral attitudes and intention, such as emotional reactions (Chen and Gao, 2019), affective commitment (Garnefeld et al., 2011), repurchase intention (Fang et al., 2023), and continuous usage intention (Talwar et al., 2021) rather than actual behavior (Lohse and Kemper, 2019). Accordingly, whether and how senders' positive WOM intentions impact their own actual consumption behavior (e.g., purchase amount and visit frequency) remains unknown.

Second, while online shopping continues to expand rapidly following the COVID-19 pandemic, frontline employees' significance in offline channels is increasingly emphasized as a key factor for service differentiation (Alavi et al., 2021; Elmashhara and Soares, 2019; Nakamori et al., 2024). As Nakamori et al. (2024) noted, frontline employees' perceived services play a crucial role in determining whether customers decide to visit or return to a store. This implies that customer loyalty to offline retailers may vary depending on their relationship with the service provider, meaning that personal interactions with frontline employees can be an important driver in strengthening customers' intentions to spread positive WOM (Holmqvist et al., 2019). However, the effect of customer-salesperson interaction in the shopping mall context where customers have a highly positive WOM intention is not well understood.

Third, to thoroughly understand the connection between positive WOM intentions and actual behavior as perceived by senders, we argue that it is necessary to consider the attributes or characteristics of the external retailer environment encountered by senders, such as the COVID-19 pandemic (Zhou et al., 2023). The shopping malls that were the subjects of this study are retail locations that provide a broad assortment of domestic and global products across a range of categories throughout the world (Das and Varshneya, 2017; Elmashhara and Soares, 2022). In the early stage of the COVID-19 pandemic, customers were unable to travel abroad, prompting shopping malls to redefine their role as providers of attractive global products by incorporating additional features and functionalities. Nevertheless, current research does not comprehensively account for the impact of customers' attachment to global products (a recent distinguishing factor for shopping malls) on their actual consumption behavior during the COVID-19 pandemic.

To fill this notable gap in the literature, we aim to empirically analyze the link between customers' (as senders) positive WOM intentions and their actual consumption behavior by considering frontline employees' personal interactions and global product attachment. In particular, we aim to advance our knowledge in three major ways. First, to overcome prior studies' first key limitation, we investigate the direct impact of customers' positive WOM intentions on their actual consumption behavior from the perspective of senders. In contrast to prior studies focusing on the subjective assessment of purchasing behavior (e.g., Le et al., 2022), and building on the insights of Pare and Pourazad (2017), we measure the outcomes of positive WOM intention by adopting more specific factors, namely, the purchase amount per shopping trip and visit frequency of shopping malls. Surprisingly, contrary to our expectations, our findings reveal that the direct impact of positive WOM intentions is nonsignificant. In this sense, we offer theoretical insights that integrate the consideration of other factors involved in the shopping process to elicit the actual consumption behavior of senders who intend to spread WOM.

Second, this study explores the interaction effect of frontline employees' personal interactions and positive WOM intention on actual consumption behavior, employing self-expansion theory to improve the second key limitation observed in previous research. We emphasize that customers' intimate interactions with frontline employees strengthen the effects of positive WOM on purchase amounts and visit frequency. Our study is the first to demonstrate the moderating effect of frontline employees' personal interactions on senders' WOM intentions in predicting their actual behaviors.

Third, building on previous insights into the positive consequences of product attachment (Badrinarayanan and Becerra, 2019; Pedeliento et al., 2016), we propose that the moderating effect of frontline employees' personal interaction on the link between positive WOM intention and actual consumption behavior is dependent on customers' attachment to foreign products. This is in line with attachment theory. We highlight that customers with high attachment to global products (vs. low attachment) exhibit an increased purchase amount per shopping trip when their positive WOM intention and frontline employees' personal interactions are high. However, this pattern did not apply to visit frequency. Therefore, from the perspective of individual attachment to global products, we enhance our understanding of the boundary conditions under which online employees' personal interactions can effectively but differently influence actual consumption behavior, thus addressing the third major limitation of prior research.

2. Theoretical background and hypotheses development

Early investigators of shopping malls defined it as "a unique retail environment in numerous ways, grouping a mix of service and retail businesses under one roof managed as a single unit" (Krey et al., 2022, p.4), have identified WOM to be a critical factor in their retail management. As summarized in Table 1, these studies have primarily focused on the relationship between various stimuli within shopping malls and consumers' WOM responses (Elmashhara and Soares, 2022). Specifically, store environmental factors include store atmosphere elements, such as music, lighting, and color schemes (Elmashhara and Soares, 2022), mall spaciousness (Rosenbaum et al., 2016), shopping mall characteristics, such as crowding, co-visitors, and events (Das and Varshneya, 2017), and store elements, such as accessibility, price, and assortment (Chebat et al., 2010). Researchers have examined two broad categories of store factors: hedonic and utilitarian values (El Hedhli et al., 2016). Many store factors have been found to exert a positive influence on WOM, both directly and indirectly (e.g., Chebat et al., 2010; Elmashhara and Soares, 2022). Taken together, we can summarize that, while WOM is important in managing shopping malls, prior research has largely conceptualized WOM as an outcome variable resulting from diverse store stimuli and environmental factors.

However, we observed that insights into the effects of WOM on shoppers' actual behavioral patterns in shopping malls are obscure. In this line of discussion, Table 2 provides the summary of key empirical studies on relationships between WOM communication and actual consumption behavior in diverse contexts. Extant research in Table 2 has

Table 1
Key prior studies on WOM at retail shopping mall.

Study	Study context	Theoretical perspective	Main focus	Key findings
Chebat et al. (2010)	Survey of 861 consumers in two large shopping malls in Montreal, Canada	Mall image	Examination on the effects of mall image dimensions (i.e., access, store atmosphere price, cross- and within category) on mall attitude, mall patronage, and positive WOM through mall image	• Mall image dimensions have a positive effect on mall attitude, mall patronage and WOM.
El Hedhli et al. (2013)	Survey of 720 consumers in two shopping malls in a Canadian city	Shopping well-being	Examination on the effect of shopping well-being on mall loyalty and positive WOM Also, to investigate mall factors (i.e., functional, convenience, safety, leisure, atmospherics, self-identification) that influence shopping well-being	• Shopping well-being has a positive effect on loyalty and positive WOM. • All mall factors have positive effects on shopping well-being.
El Hedhli et al. (2016)	Survey of 323 consumers in urban shopping malls in North America	Shopping value (hedonic and utilitarian); Shopping well-being	Examination on the effects of shopping value (i.e., hedonic vs. utilitarian) on mall attitudes and WOM through shopping well-being	• Hedonic value has a positive effect on shopping well-being, while utilitarian value has no effect on shopping well-being. • Shopping well-being has a positive effect on both mall attitudes and WOM. • The moderating effects of a shopper's gender and self-congruity on the relationship between shopping value and shopping well-being are both not significant.
Rosenbaum et al. (2016)	Survey of 400 consumers in one of the largest shopping malls in South America	Attention restoration theory	Examination of the effects of restorative stimuli (i.e., fascination, being away, coherence, scope, compatibility) on shopper satisfaction, WOM, and loyalty in a shopping mall	• The consumer cluster that perceives high restorative stimuli (vs. low perception) in the shopping center has significantly higher mean values for shopper satisfaction, WOM, and loyalty.
Das and Varshneya (2017)	Survey of 346 consumers in a shopping mall in metropolitan India	Arousal; Pleasure	Examination on the effects of arousal and pleasure on shopping mall repatronage intention and positive WOM and the effects of shopping mall factors (i.e., human crowding, spatial crowding, co-visitors, promotional event) on arousal and pleasure	• Arousal and pleasure have a positive effect on repatronage intention and positive WOM. • Perceived human crowding, co-visitors, and promotional events increase arousal and pleasure, but perceived spatial crowding only has a positive effect on arousal, with no effect on pleasure.
Elmashhara and Soares (2022)	Survey of 429 consumers in four shopping mall in Portugal	S-O-R paradigm; Desire to Stay	Examination on mediating role of the desire to stay at the shopping mall in the relationship between atmospheric cues (i.e., color, lighting, music) and the shopping outcomes of shopper satisfaction, positive WOM, and patronage intentions	• Color schemes and music have a positive effect on positive WOM through desire to stay at shopping mall, but no effect of lighting on positive WOM through desire to stay. • Desire to stay has a positive effect on positive WOM through shopper satisfaction.
Our study	Survey of 521 Chinese consumers in the retail shopping mall industry	Self-expansion theory; Attachment theory	Examination on the relationship between positive WOM intention and purchase behaviors through frontline employees' personal interaction and global product attachment	• Frontline employees' personal interaction strengthens direct effects of positive WOM intention on purchase amount (ns) and visit frequency (ns). • A positive interaction effect between positive WOM intention and frontline employees' personal interaction on purchase amount is strengthened among consumers with stronger global product attachment.

Note: N/A = Not Applicable; ns = Nonsignificant relationship.

largely concentrated on the effects of WOM on receivers' purchasing behavior based on the number of reviews (Fan et al., 2021), valence of reviews (Chen et al., 2011; Eslami and Ghasemaghaei, 2018), source reliability (Hu et al., 2008; Kaushik et al., 2018), and review sequences (Flavián et al., 2016; Kaushik et al., 2018). Some studies have also explored the effects of WOM on cross-channel purchase behavior (Flavián et al., 2016) over different product categories (Eslami and Ghasemaghaei, 2018) while considering an international comparative context (Le et al., 2022). An underlying premise of the effect of WOM on consumer behavior is that the information generated by the senders who have acquired and used the product enhances receivers' abilities to assess the quality of the product, thus significantly reducing information asymmetry (Fan et al., 2021). This reduces uncertainty and increases confidence in consumer decisions (Flavián et al., 2016), thereby smoothing transactions and increasing efficient values (Hu et al., 2008).

Although WOM effects on receivers are widely acknowledged, several studies have also offered insights into WOM effects from the sender's perspective in various contexts, such as behavioral loyalty and affective commitment (Garnefeld et al., 2011), future WOM intention and self-enhancement (Chawdhary and Dall'Olmo Riley, 2015), emotional reactions (Chen and Gao, 2019), repurchase intention (Fang et al., 2023), and continuous usage intention (Talwar et al., 2021). However, less is known about how WOM participation affects customers' own actual purchases. One notable exception is Lohse and Kemper (2019), who documented the positive impact of WOM participation on participants' purchase behaviors, highlighting the significance of WOM effects on actual consumption behaviors from the perspectives of both receivers and senders in retailing and marketing practices. Additionally, prior research has not fully investigated whether and how customers' personal interactions with frontline employees in retail stores and their attachment to global products influence their WOM intentions and consumption behaviors.

To address this gap, we draw on self-expansion theory and attachment theory to theorize the conditional effects for the connection between customers' (as senders') positive WOM intentions and actual consumption behaviors. Specifically, as depicted in Fig. 1, we first examine how customers' positive WOM intentions affect their actual consumption behavior from the sender's perspective, specifically looking at a) purchase amount and b) visit frequency. Next, we explore how frontline employees' personal interactions moderate the impact of positive WOM intentions on actual consumption behavior. Finally, we suggest that the moderating effect of frontline employees' personal

Table 2
Key empirical studies on the relationship between WOM and actual consumption behaviors.

Study	Study context	Theoretical perspective	WOM-related aspect (s)	Explanatory mechanism(s)		Outcome variable (s)	Key findings related to our study
				Mediator(s)	Moderator(s)		
Hu et al. (2008)	Analysis of 26 batches of review and 30,040 items (i.e., books, DVDs, and videos) sold on Amazon in 2005	Transaction cost economics theory; Uncertainty reduction theories	Favorable review	N/T	Reviewer quality; Reviewer exposure	Abnormal sales[a]	• Direct effect (+) is moderated by reviewer quality (+) and reviewer exposure (+).
Chen et al. (2011)	Three longitudinal, quasi-experimental field study of 90 digital cameras for Study 1 in 2005, 39 digital cameras for Study 2 in 2006, 61 digital cameras for Study 3 in 2007	The accessibility-diagnosticity model; The information cascade theory	Positive WOM[b]; Negative WOM[b]	N/T	N/T	Sales rank	• Direct effect of positive WOM (ns) and negative WOM (−) on sales rank.
Flavián et al. (2016)	Two experimental studies of 63 college students regarding the purchase of smartphone for Study 1 and 101 participants regarding a strap bag/a universal serial bus memory stick for Study 2	Information processing; Uncertainty reduction theory	Online customer positive review	N/T	Motivation to touch	Choice (of a target vs. rival product)	• Direct effect (ns) is moderated by motivation to touch (ns) in Study 1. • Direct effect (+) is moderated by motivation to touch (ns) in Study 2.
Eslami and Ghasemaghaei (2018)	Analysis of panel data on 3,719 online reviews for music instrument and 11,467 for digital music sold on Amazon from January 2009 to January 2014	Heuristic-systematic model of information processing	Online review positiveness	N/T	N/T	Sales[c]	• Direct effect (+) in both digital music (i.e., a low involvement product) and musical instrument (i.e., a high involvement product).
Kaushik et al. (2018)	Analysis of panel data on 57 smart phone products sold on Amazon in 2016	Cognitive overload theory; Message persuasion theory; Belief adjustment model	Informativeness; Message persuasiveness; Valence	N/T	N/T	Product sales[d]	• All direct effects are supported[e].
Lohse and Kemper (2019)	Analysis of transaction data on 410,796 individual German customers from a large online fashion retailer	Self-perception theory	Writing online customer review	N/T	N/T	(The number of) Orders; Sales (in units); Sales after returns (in units)[b]	• All direct effects (+).
Fan et al. (2021)	Analysis of 80 Chinese movies released from February 2016 to December 2017	Signaling theory	e-WOM valence; e-WOM volume	N/T	Signaling environment[f]	Actual box office sales[g]	• Direct effect of e-WOM valence (ns) is moderated by signaling environment (ns). • Direct effect of e-WOM volume (+) is moderated by signaling environment (ns).
Le et al. (2022)	A cross-national survey of 312 (Study 1), 370 (Study 2), and 1044 (Study 3) Taiwanese, Thai, and Vietnamese consumers in the sport, travel, and hospitality, fashion and accessories, and health and beauty industries	Uses and gratification theory	Textual comment; Contextual image, Star rating	Online trust in brand (OLTB); Purchase intention	The perceived effectiveness of social media platforms (PESMP)	Purchase behavior	• Direct effect of textual comment (N/T), contextual image (N/T), and star rating (N/T) on purchase behavior is mediated by OLTB (+) and purchase intention (+) and also moderated by PESMP (ns) for the pooled sample. • Direct, indirect, and moderating effect vary across the three countries.
Our study	Survey of 521 Chinese consumers in the retail shopping mall industry	Self-expansion theory; Attachment theory	Positive WOM intention	N/T	Frontline employees' personal interaction; Global product attachment	Purchase amount; Visit frequency	• Direct effect of positive WOM intention on purchase amount (ns) is moderated by frontline employees' personal interaction (+) among consumers with stronger global product attachment (+). • Direct effect of positive WOM intention on visit frequency (ns) is moderated by frontline employees' personal interaction (+) among consumers with stronger global product attachment (ns).

Note: N/T = Not tested; ns = Nonsignificant relationship; (+) = Significant positive effect; (−) = Significant negative effect.

[a] The abnormal sales = actual sales change$_t$ – average change in sales for the benchmark portfolio$_t$.

[b] Positive (or Negative) WOM measured the difference in the percentage of 5-star (or 1-star) reviews between the two periods.

[c] Sales rank is measured as a negative substitute proxy.

[d] Negative logarithm of product's sale rank given on product page.

[e] In the online review context, while a direct effect of number and average informativeness of helpful reviews, percentage of verified reviews, popularity of helpful reviews, and balance of helpful reviews on product sales is positive, sequence of informativeness in helpful reviews and sequence of negative reviews have a negative impact.

[f] Number of ongoing movies for movie *i* at day *t*.

[g] Movie sales (economic revenue) for movie *i* at day *t*.

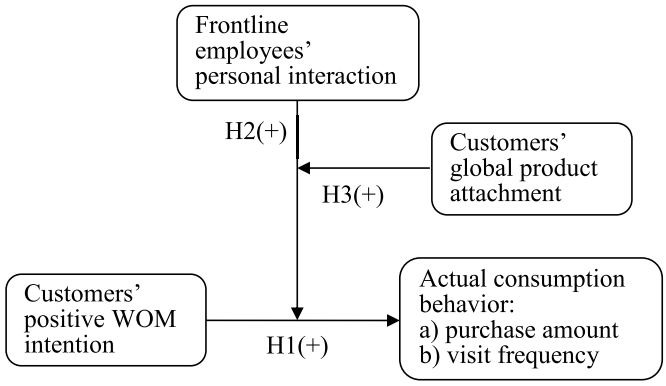


Fig. 1. Conceptual framework.

interactions on the relationship between positive WOM intentions and actual consumption behavior is dependent on customer attachment to global products.

2.1. Direct effect

This study posits that a sender's intention to spread positive WOM encourages their own actual consumption behavior. Based on signaling theory, WOM serves as an external quality signal for receivers and facilitates purchase decision-making by reducing information asymmetry (Barari et al., 2020; Fan et al., 2021; Holmqvist et al., 2019; Kim et al., 2024). As suggested in previous studies (Table 1), receivers are more likely to act on WOMs from reviewers that more informed and credible than customers (Hu et al., 2008; Kaushik et al., 2018). The impact of WOM on purchase behavior indicates the important role of reviewers in providing credible and informative content that drives value for a firm (Chen and Gao, 2019). Further, WOM participation is believed to have a reciprocal effect on senders (Chawdhary and Dall'Olmo Riley, 2015; Garnefeld et al., 2011).

Self-perception theory offers a theoretical foundation for understanding how engagement in WOM activities affects senders' behavioral patterns in their shopping, as people tend to align their behaviors with their attitudes after making a public endorsement (Garnefeld et al., 2011). In this line of reasoning, Lohse and Kemper (2019) found that reviewing customers place more orders and make more purchases than non-reviewing customers as reviewers try to maintain internal consistency in their attitudes and behaviors. Extending this logic to our research, we assume that communicating favorably about a shopping facility will have a positive impact on senders' purchase amount and visit frequency, as they try to adhere to their endorsement in terms of the commitment–consistency principle. Hence, we hypothesize.

H1. Consumers' positive WOM intentions increase their actual consumption behavior in terms of a) purchase amount and b) visit frequency.

2.2. Moderating effects

2.2.1. Frontline employees' personal interactions

The present study further extends our assumption in H1 by focusing on the social aspects of offline shopping, namely, interpersonal contact between customers and frontline employees. Social interactions between consumers and frontline employees have considerable significance for the overall offline shopping experience (Elmashhara and Soares, 2019; Nakamori et al., 2024). The acquisition of social value through personal interactions with frontline employees represents a pivotal determinant in increasing customer satisfaction in the retail setting (Dabholkar et al., 1996; Lee and Dubinsky, 2017), as customers inherently place considerable importance on interactions with others (Rippé et al., 2018). Furthermore, from the perspective of customer relationship management, providing enjoyable social interactions to customers, in addition to frontline employees' abilities such as expertise and friendliness, is essential for maintaining a profitable customer-retailer relationship (Arditto et al., 2020).

We adopt self-expansion theory for the moderating role of frontline employees' personal interaction to better understand the linkage between customers' positive WOM intentions and their actual consumption behavior. Self-expansion theory is based on two core principles: humans possess an innate drive for self-improvement, and this inclination is fulfilled through intimate relationships (Aron et al., 2001). According to Aron et al.'s (2022) updated review, close personal relationships that provide new perspectives, identities, and knowledge are a significant avenue for achieving self-expansion (in our study with frontline employees). Based on the principles of self-expansion theory, we assume that intimate interactions with frontline employees during the shopping process can satisfy individuals' motivation for heightened self-awareness. Similarly, Goff and Walters (1995, p. 917) posited that "the shopping process should bolster the ego of shoppers through the enactment of a socially affirming role."

Self-expansion theory is widely employed in marketing literature to investigate the relationship between brands and customers, offering valuable insights into how brands cultivate intimate relationships with customers. This is accomplished by facilitating diverse interactive experiences, including sensory, affective, social, and intellectual explorations (de Kerviler and Rodriguez, 2019). Interestingly, customers with high attachment to a brand have strong motives to expand themselves by investing their own resources (e.g., time, social, and financial) in the brand (Park et al., 2010). This means that customers may allocate more resources to entities that are strongly connected to themselves in terms of social advocacy, premium prices, and active participation.

Intimate relationships are not limited to brands. As mentioned previously, we regard frontline employees as entities in which customers engage in social interactions for self-expansion. When customers build a close relationship with a salesperson, they tend to consider the salesperson part of their own group, and this biased perception can lead to enhanced psychological value by customers (Smith et al., 2018). Therefore, establishing strong connections with salespersons results in a good image, satisfaction and loyalty toward intangible entities such as stores (Errajaa et al., 2022; Nakamori et al., 2024). This suggests that when customers obtain necessary information from frontline employees and engage in active communication during the shopping process, driven by self-expansion motivation, their positive psychological value toward the store can be enhanced. This, in turn, can translate into loyal behaviors, such as increased purchases and more frequent visits. Based on insights from previous investigations, we assume that the more active the personal interaction between frontline employees and customers, the greater the impact of senders' positive WOM intentions in the shopping mall context on their actual consumption behavior. Hence, we hypothesize.

H2. The positive effect of customers' positive WOM intention on the actual consumption behaviors of a) purchase amount and b) visit frequency is stronger when there are strong personal interactions between frontline employees and customers.

2.2.2. Global product attachment

For offline retail channels such as shopping malls, the key factors that convert consumers' positive behavioral intentions (i.e., WOM intention) into actual consumption behavior are the relationship quality with salespeople and the innovative product assortment that conveys a sense of novelty to customers. Therefore, this study extends H2 by considering the moderating effects of customers' global product attachment, which ultimately affect customers' actual visits and purchase behaviors.

We briefly explore the context of the Chinese market to gain a deeper understanding of preferences and buying behavior. Chinese consumer preferences for domestic and global products (or brands) have been

extensively explored in the literature on international business and marketing, highlighting contradictory constructs of ethnocentrism and xenocentrism (Han and Guo, 2018; Mueller et al., 2016; Sun et al., 2021; Yu et al., 2022). According to the extant literature, consumer xenocentrism in China is gradually increasing, particularly among younger generations and emerging affluent classes who prefer global goods over domestic ones. In addition, Mueller et al. (2016) argued that the Chinese economy has undergone almost double-digit growth for more than 30 years and has increased openness to global products. They also found that consumers' preference for global products over domestic ones stems from superior product quality and the social meaning of global products as markers for superior social status. Therefore, we believe that the investigation of consumer preferences for global products from a socio-psychological perspective can extend our understanding of more comprehensive behavioral patterns in shopping malls.

We adopted attachment theory to conceptually underpin our study and derive H3, which hypothesizes a three-way interaction effect in terms of global product attachment. This theory was conceptualized to comprehend the enduring and strong emotional bonds between people and others beyond physical constraints (Bowlby, 1969; Li et al., 2021; Pedeliento et al., 2016). Attachment is defined as "the lasting psychological connectedness between human beings" (Bowlby, 1969, p. 194). Drawing on the principles of attachment theory, marketing scholars have employed the notion of attachment to distinct objects, including brands (Park et al., 2010), products (Pedeliento et al., 2016), retailers (Vlachos and Vrechopoulos, 2012), non-tangible services like virtual platforms (Li et al., 2021), and even to countries (Kim et al., 2022b). However, applications of this concept remain limited. Moreover, most prior investigations of brand attachment have focused on its function as a mediating variable, with brand loyalty and purchase intention serving as outcome variables (Hemsley-Brown, 2023).

To fill this gap, we highlight the moderating effect of global product attachment on the relationship depicted in H2. Based on Badrinarayanan and Becerra (2019), this study defines global product attachment as the psychological bonds between a global product and the customer's self, as well as the prominence of product-related cognitions and affective states in the customer's mind. We suggest that when senders' positive WOM intention and frontline employees' personal interaction are evident, consumers with a high global product attachment will increase their actual consumption behavior in the context of offline shopping at the malls when compared to instances of low global product attachment.

The rationale behind this is as follows. First, in the context of acquiring information for purchase decision-making, we anticipate that there will be different expectations regarding interaction with frontline employees, depending on the degree of product attachment. When consumers have personal interest and assign significant importance to a particular product, they typically exert substantial effort in seeking additional product information to reduce perceived risks before reaching a decision (Rokonuzzaman et al., 2020). Given consumers' need for relevant information about emotionally attached products, a salesperson can serve as an agent offering sufficient product information to consumers in an offline shopping context.

Earlier studies suggested that frontline employees may influence customers' expectations regarding a product by helping them obtain useful information or guidelines about product usage, leading to a more comprehensive evaluation of favorable products and decreasing the likelihood of product dissatisfaction (Nakamori et al., 2024; Smith et al., 2018). Moreover, frontline employees' communication that focuses on informativeness enhances their perceptions of product value (Alavi et al., 2021). This implies that frontline employees' personal interactions and product value are positively correlated when evaluating retail quality. From the perspective of market novelty, global companies distinguish themselves from domestic ones by necessitating personalized service offerings from frontline employees. This is because customers typically are less familiar with global products and require detailed information about them (e.g., manufacturer details, production processes, and product usage instructions), especially when they feel emotional attachments toward these products. Therefore, for customers deeply attached to global products, interactions with salespersons can significantly enhance their decision-making process by providing additional informative value about the retailer's global product offerings.

Second, attachment is considered a crucial construct to explain consumer loyalty in marketing research, as it refers to an individual's willingness to sustain physical or psychological proximity to the attachment object (here, a global product; Pedeliento et al., 2016). The extant literature provides several findings that customers' attachment to a particular object can increase patronage intention (Badrinarayanan and Becerra, 2019), product irreplaceability (Pedeliento et al., 2016), and share of wallets and visits (Hwang et al., 2019). For instance, according to attachment theory, Aboulnasr and Tran (2020) demonstrated that emotional attachment to a specific brand reduces individuals' perceived risks of new products, thereby fostering positive intentions to accept and evaluate those innovations. Building on previous research, we expect that customers' attachment to global products offered by retailers may similarly bolster their positive expectations and evaluations of the retailer, driven by a spillover effect.

Specifically, we assume that when senders' positive WOM intention is evident, customers with a high attachment to global products are likely to place higher value on social interactions with frontline employees and prefer to spend money and visit stores more actively than those with a low attachment. Thus, the following hypothesis is proposed.

H3. Global product attachment strengthens the positive interaction effect between positive WOM intentions and frontline employees' personal interactions on customers' actual consumption behaviors in terms of a) purchase amount and b) visit frequency.

3. Method

3.1. Research context and data collection

We focus on consumer consumption behavior in shopping malls in major urban cities that consumers frequently visit in mainland China. As shown in Table 1, shopping centers have been steadily expanding worldwide, including in South America (Rosenbaum et al., 2016), North America (El Hedhli et al., 2016), Canada (Chebat et al., 2010), India (Das and Varshneya, 2017), and Portugal (Elmashhara and Soares, 2022). However, in China, shopping malls have become the preferred destination for the public, as highlighted by Zhou et al. (2023), who examined the dynamics of commercial centers in the urban areas of emerging nations. China, a country exemplifying the harmonious coexistence of diverse cultural attitudes among consumers, is home to various local and international retailers, located in shopping malls throughout the country. In a collectivist society, personal relationships and the opinions of others hold significant weight.

To gather data on this topic, by employing a quota sampling technique in terms of gender, we administered a questionnaire survey using an online panel from a Chinese marketing research company in the early stages of the COVID-19 pandemic in mainland China during the summer of 2020. We received 521 valid responses from those who expressed interest in our research topic on consumption behavior in shopping malls, which are presented in Table 3 along with a summary of the sample profiles. Among the 521 respondents, 259 (49.7%) were female and 262 (50.3%) were male. 58.6% (n = 305) of the respondents were consumers in their 30s and 40s. A total of 58.3% of the responses reported more than 90,000 yuan, which was close to the average annual income in 2019 (i.e., 90,501 yuan, equivalent to 12,964 US dollars). A total of 69.3% of respondents (n = 361) were married. Finally, regarding affiliation of retail shopping malls respondents frequently visiting to shops, the percentages of foreign companies vs. domestic companies were 34.5 % (n = 180) and 65.5% (n = 341), respectively.

Table 3
The description of sample profile (n = 521).

Variables	n (%)	Variables	n (%)
Gender		*Annual income*[a]	
Male	262 (50.3)	Below 89,999	217 (41.7)
Female	259 (49.7)	Above 90,000	304 (58.3)
Age		*Marital status*	
Below 20	51 (9.8)	The married	361 (69.3)
20–29	153 (29.4)	Others	160 (30.7)
30–39	152 (29.2)	*Retail affiliation*[b]	
40–49	103 (19.8)	Foreign company	180 (34.5)
Above 50	62 (11.9)	Domestic company	341 (65.5)

Note: n = Number of samples; % = Percentage.
[a] The Chinese yuan. According to the National Bureau of Statistics in 2019, the average annual income for urban non-private enterprises in China was 90,501 yuan (equivalent to 12,964 US dollars).
[b] Affiliation of retail shopping malls you frequently visit to shop.

3.2. Measurement

Table 4 summarizes the constructs and scale items. Respondents were asked to evaluate three remaining constructs on a five-point Likert scale, where "strongly disagree" (1) and "strongly agree" (5) were extreme points. The purchase amount and visit frequency were the only exceptions and were not included in the rating process. First, following Holmqvist et al. (2019) and Barari et al. (2020), we used three items to assess positive WOM intentions. Second, following Dabholkar et al. (1996), we evaluated frontline employees' personal interactions using five items. Third, we used four items to measure global product attachment (Pedeliento et al., 2016). Fourth, building on Pare and Pourazad (2017), we assessed two aspects of actual consumption behavior. We determined the purchase amount per shopping trip by asking respondents to report their average purchase amount each time they visited a shopping mall. In addition, we measured the frequency of their visits to shopping malls by asking how often they visited shopping mall, on average, in a month.

Finally, we attempted to control for potential heterogeneity among respondents in Table 3 and incorporated five dummy variables to obtain non-biased and more generalizable results: gender (male = 1, female = 0), age (20s = 1, others = 0; 30s = 1, others = 0; 40s = 1, others = 0; above 50s = 1, others = 0), annual income (above 90,000 yuan = 1, others = 0), marital status (married = 1, others = 0), and retail affiliation (foreign company = 1, domestic company = 0).

Table 4
Constructs and measurement assessment (n = 521).

Constructs and scale items	Estimate[a]	CR[b]
Positive WOM intention (Cronbach's α = 0.755)		0.803
It is likely that I would tell others about the positive service I received.	0.614	
It is likely that I would recommend friends and relatives to visit the shopping malls.	0.796	
It is likely that I would recommend the shopping malls to friends and relatives.	0.746	
Frontline employees' personal interaction (Cronbach's α = 0.665)		0.724
Frontline employees in the shopping malls have the knowledge to answer customers' questions.	0.518	
Customers feel safe in their transactions with frontline employees in the shopping malls.	0.566	
Frontline employees in the shopping malls give prompt service to customers.	0.552	
Frontline employees in the shopping malls tell customers exactly when services will be performed.	0.476	
Frontline employees in the shopping malls are consistently courteous with customers.	0.563	
Global product attachment (Cronbach's α = 0.862)		0.824
I am always captivated by global products.	0.765	
Compared with domestic products, I have always been attached to global products.	0.863	
I always love global products more than domestic products.	0.795	
I am always being inspired by global products.	0.703	
Purchase amount (per shopping trip)		N/A
What is the average purchase amount for each time you visit shopping malls? _____yuan per shopping trip	N/A	
Visit frequency (of shopping malls in a month)		N/A
How many times do you visit shopping malls in one month on average? _____times per month	N/A	

Note.
[a] Standardized factor loading.
[b] CR: composite reliability; N/A: not applicable.

3.3. Common method bias

By adhering to the marker variable technique (Lindell and Whitney, 2001) we addressed the issue of common method bias. We utilized an item from a theoretically unrelated scale (i.e., "It is not right to purchase foreign products because this puts Chinese people out of jobs" with correlations ranging from $|r| = 0.002$ to 0.028) as a covariate in our data analysis. The negligible differences between the adjusted and observed correlations ($\Delta|r| = 0.000$ to 0.001) indicate that common method bias does not happen in our data.

4. Analysis and results

4.1. Construct validity

We conducted a confirmatory factor analysis (CFA) to evaluate the construct's validity; the results showed a satisfactory fit of the measurement model (χ^2 (51) = 91.177, $p < 0.001$, CMIN/DF = 1.788, IFI = 0.978, CFI = 0.978, RMSEA = 0.039, GFI = 0.973). To ensure the convergent validity of the data, we examined composite reliability (CR; Bagozzi and Yi, 1988) and Cronbach's alpha (α; Taber, 2018). Both values were satisfactory, with CR ranging from 0.724 to 0.824 and Cronbach's α ranging from 0.665 to 0.862, which is above the 0.6 threshold (Table 4). In addition, to assess discriminant validity, the fit of the one-construct model was compared with that of the original two-construct model (Bagozzi and Yi, 1988). The results indicated that the fit of any unrestricted two-construct model was significantly superior to that for the one-construct model ($p < 0.001$). For instance, the fit of the original two-construct model was significantly different from the constrained one-construct model ($\Delta\chi^2$ (1) = 198.395, $p < 0.001$) for positive WOM intention and frontline employees' personal interaction, which have the highest correlation (0.499) in Table 5, suggesting discriminant validity.

Table 5
Descriptive statistics and correlation matrix (n = 521).

Constructs	Mean	SD[a]	X1	X2	X3	X4
X1. Positive WOM intention	3.962	0.724				
X2. Visit frequency	3.572	2.434	0.048			
X3. Purchase amount	630.470	1043.390	0.100*	0.065		
X4. Frontline employees' personal interaction	3.925	0.571	0.499*	0.017	0.102*	
X5. Global product attachment	2.815	0.975	0.100*	0.045	0.119*	0.168*

Note.
*$p < 0.05$.
[a] SD: standard deviation.

4.2. Hypothesis testing

We conducted a hierarchical linear regression analysis to evaluate our hypotheses (Aiken and West, 1991). We mean-centered all predictor variables prior to creating the interaction terms. Table 6 summarizes the results (see Appendix A, which provides additional information on the unstandardized coefficients, standard errors (SE) of coefficients, *t*-values, and *p*-values).

Specifically, as shown in Model 3 (i.e., full model), contrary to our initial hypothesis for H1, the results showed that customers' positive WOM intention is not related to their a) purchase amount ($\beta = 0.047$, $p = 0.370$) and b) visit frequency ($\beta = 0.095$, $p = 0.083$). Therefore, H1a and H1b were not supported. However, our predictions for H2a and H2b were supported, as the results revealed that frontline employees' personal interaction strengthens the effect of customers' positive WOM intention on their a) purchase amount ($\beta = 0.110$, $p = 0.017$) and b) visit frequency ($\beta = 0.115$, $p = 0.016$). With regard to H3, the results showed that while customers' global product attachment strengthens the interaction effect between positive WOM intention and frontline employees' personal interaction on their a) purchase amount ($\beta = 0.146$, $p = 0.002$), this three-way interaction effect on b) visit frequency ($\beta = -0.035$, $p = 0.477$) is not significant. Therefore, H3a was supported, but H3b was not.

We also performed an ad hoc analysis employing simple slope analysis to determine the interaction effects (Aiken and West, 1991). The results of the two-way interaction effect are displayed in Fig. 2, indicating that the impact of positive WOM intention on actual consumption behavior becomes stronger when frontline employees' personal interaction is high ((a) purchase amount, b = 205.858, $p = 0.058$; (b) visit frequency, b = 0.652, $p = 0.013$)) but weaker when frontline employees' personal interaction is low ((a) purchase amount, b = −0.69.074, $p = 0.389$; (b) visit frequency, b = −0.014, $p = 0.940$)). The three-way interaction effects are outlined in Fig. 3. The results highlight that among consumers with high global product attachment (Plot A), the positive link between positive WOM intention and a) purchase amount becomes positive (b = 415.680, $p = 0.015$) when frontline employees'

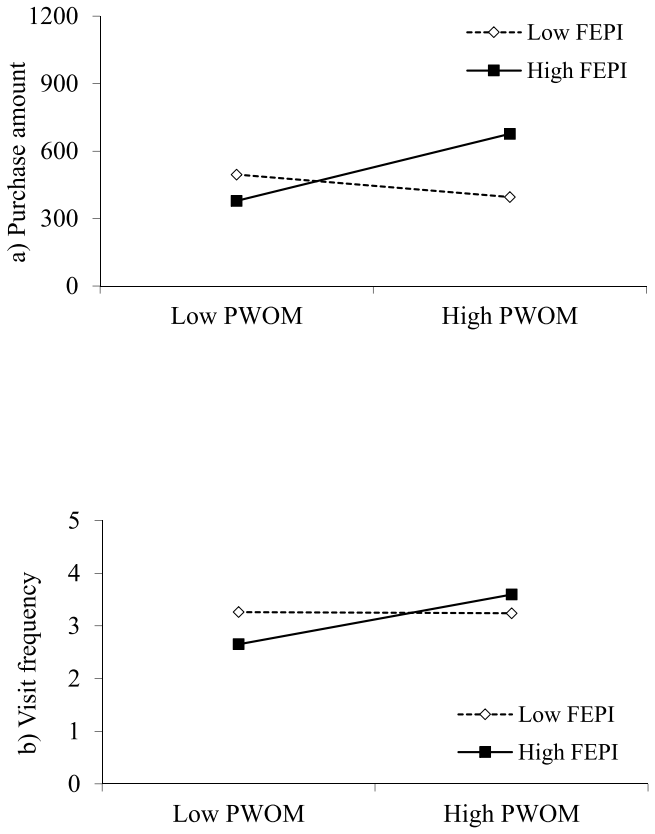


Fig. 2. Two-way interaction effect.
Note: PWOM = Positive WOM intention; FEPI = Frontline employees' personal interaction; Fig. 2 presents the simple slopes of positive WOM intention on a) purchase amount and b) visit frequency at ±1 SD (i.e., high vs. low) from the mean of frontline employees' personal interaction.

Table 6
Regression analysis results (n = 521).

Independent variables (IV)	Actual consumption behavior (= Dependent variables, DV)					
	(a) Purchase amount (per shopping trip)			(b) Visit frequency (in a month)		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Intercept	530.385***	507.332**	486.539**	3.255***	3.175***	3.187***
Direct effects						
H1. Positive WOM intention (PWOM)	0.034	0.069	0.047	0.051	0.090	0.095
Frontline employees' personal interaction (FEPI)	0.028	0.042	0.039	−0.026	−0.027	−0.027
Global product attachment (GPA)	0.083	0.070	0.013	0.014	0.016	0.030
Two-way interaction effects						
H2. PWOM × FEPI		0.121**	0.110*		0.112*	0.115*
PWOM × GPA		−0.004	0.026		−0.032	−0.039
FEPI × GPA		0.069	0.053		−0.022	−0.018
Three-way interaction effect						
H3. PWOM × FEPI × GPA			0.146**			−0.035
Control variables						
Gender	−0.046	−0.052	−0.046	0.018	0.019	0.018
Age_20s	−0.114	−0.116	−0.109	−0.070	−0.069	−0.070
Age_30s	−0.120	−0.116	−0.111	−0.112	−0.110	−0.111
Age_40s	−0.185*	−0.191*	−0.197*	−0.025	−0.025	−0.023
Above age_50s	−0.156*	−0.142*	−0.146*	−0.103	−0.099	−0.098
Annual income	0.163***	0.147**	0.153**	0.117*	0.101*	0.100*
Retail affiliation	0.101*	0.090	0.090	0.109*	0.107*	0.107*
Marital status	0.115	0.107	0.111	0.040	0.044	0.043
R^2	0.077***	0.095***	0.111***	0.039*	0.050*	0.051*
ΔR^2		0.017	0.017		0.012	0.001
F-change	3.874***	3.229*	9.419**	1.865*	2.087	0.506

Note: Model 3 = Full model; Excluding intercepts with unstandardized coefficients, estimation results of this table present standardized coefficients; While variance inflation factors (VIF) values range from 1.082 to 4.169, values of Durbin Watson statistic range from 1.927 in the model of purchase amount to 2.059 in the model of visit frequency; *$p < 0.5$, **$p < 0.01$, and ***$p < 0.001$.

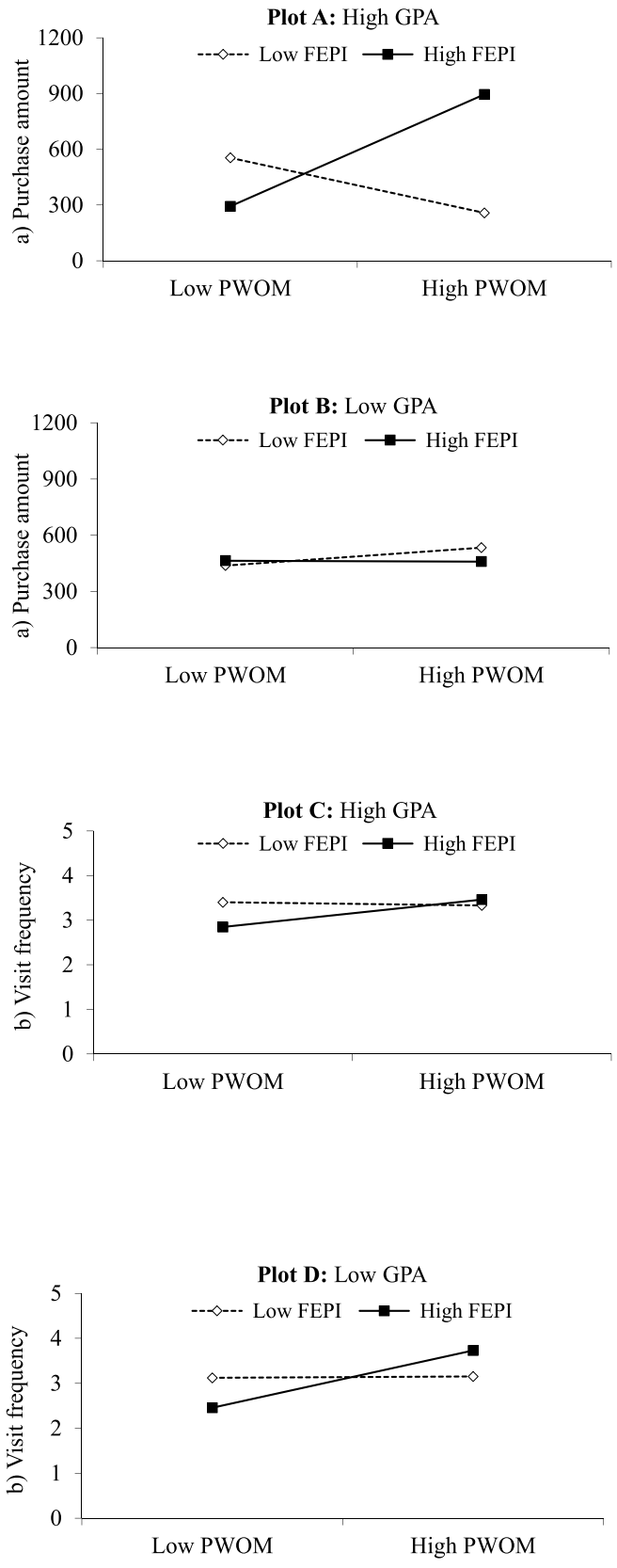


Fig. 3. Three-way interaction effect. Note: PWOM = Positive WOM intention; FEPI = Frontline employees' personal interaction; GPA = Global product attachment; Fig. 3 presents the simple slopes of positive WOM intention on a) purchase amount and b) visit frequency at ±1 SD (i.e., high vs. low) from the mean of frontline employees' personal interaction at ±1 SD (i.e., high vs. low) from the mean of global product attachment.

personal interaction is high, but weaker (b = −204.622, $p < 0.001$) when frontline employees' personal interactions are low. We found that the simple slope difference for Plot A (high global product attachment = 0.620, $p < 0.001$) is significant, but there is no significant difference for Plot B (low global product attachment = −69.377, $p = 0.572$).

4.3. Robustness check

We confirmed that the variance inflation factor (VIF) values in the purchase amount and visit frequency model were below 4.169, and the values of the Durbin Watson statistic were close to 2 (i.e., the model of purchase amount = 1.927; the model of visit frequency = 2.059). These results indicate that multicollinearity and autocorrelation in the residuals did not affect the findings of this study.

Additionally, the findings of this study indicated the direct and significant influence of several control variables on actual consumption behavior. Specifically, annual income (β = 0.153, $p = 0.001$) and age (β_40s = −0.197, $p = 0.010$; β_50s = −0.146, $p = 0.028$) were found to be associated with purchase amount. Meanwhile, visit frequency was significantly impacted by annual income (β = 0.100, $p = 0.044$) and retail affiliation (β = 0.107, $p = 0.027$). However, despite the significance of these control variables, our study results were not contingent on their inclusion or exclusion, implying that the issue of potential heterogeneity among respondents raised in the 3.2 Section does not seem to be a major concern.

Thirdly, the potential for reverse causality on the path between the independent variable (i.e., positive WOM intention) and dependent variables (i.e., purchase amount and visit frequency) could lead to endogeneity. To address this, we followed prior studies (Park and Kim, 2023) and employed a two-stage least-squares (2SLS) regression model with an instrumental variable (i.e., this shopping mall willingly handles returns and exchanges). This was based on the findings of several interviews with consumers, which revealed that although returns and exchanges are important (Kim et al., 2022a), the actual consumption behaviors of spending money and visit frequency are significantly influenced by various attractive benefits, such as merchandise, prices, store promotions, and places.

Given the critical role of returns and exchanges in fostering positive WOM intentions (Duarte et al., 2018), it is theoretically assumed that retailer policies on returns and exchanges can serve as an instrumental variable that influence customers' positive WOM intentions by enhancing their purchase amount and visit frequency. The outcomes of the two-stage least squares (2SLS) regression model corresponded with the results of our proposed model (b_purchase amount = 172.098, SE = 186.855, $p = 0.356$; b_visit frequency = 0.760, SE = 0.443, $p = 0.087$); that is, endogeneity related to possible reverse causality was not present. Our findings from a regression of the residual calculated in the 2SLS estimation on the instrumental variable also showed that the instrumental variable is not related with error in both models (b_purchase amount = 0.000, SE = 49.464, $p = 1.000$; b_visit frequency = 0.000, SE = 0.115, $p = 1.000$).

5. Discussion and implications

5.1. Theoretical implications

The present study advances our knowledge of how customers' WOM for shopping mall retailers is associated with their consumption behavior from the sender's perspective. Specifically, our findings extend the literature in two ways.

First, we contribute to prior research by testing the significant moderating role of frontline employees' personal interactions to better understand the question: *Do customers with positive WOM intentions indeed make more purchases and visit more frequently?* Based on insights from the self-expansion theory, this study highlights that active interaction with frontline employees during the shopping process enhances

the influence of customers' positive WOM intention on their actual consumption behavior of purchase amount (H2a) and visit frequency (H2b). Our findings differ from the existing literature on WOM in shopping mall settings which focuses on investigating the impact of environmental stimuli or feelings on customers' WOM (Das and Varshneya, 2017; Elmashhara and Soares, 2022), and from recent WOM research that focuses heavily on measuring WOM effects on subjective attitudes and behavioral intentions from the sender's perspective (e.g., affective commitment, Garnefeld et al., 2011; emotional reactions, Chen and Gao, 2019; repurchase intention, Fang et al., 2023). Similarly, by responding to a research call on measuring WOM's direct impact on actual consumption behavior (Lohse and Kemper, 2019), this study is novel because it extends our knowledge of the link between customers' (as senders') WOM and their actual behavior in terms of customer-salesperson communication.

However, we observed no significant direct effect of positive WOM on actual behavior (H1a and H1b). These results reaffirm the discrepancy between customers' positive behavioral intentions regarding WOM and their actual behavior. Moreover, they indicated that other potential factors simultaneously played a role in determining customers' actual behavior. The discrepancy between cognition (e.g., attitudes, beliefs, and values) and behavior aligns with cognitive dissonance theory (Festinger, 1957), which suggests that positive attitudes or behavioral intentions may not always translate into actual behavior in various consumption situations. For instance, Lavorata (2014) found an inverse association between consumer boycott intention and subsequent behavior, indicating that despite expressing an intention to act, consumers may not actually engage in boycotting retailers. This finding reveals the challenges consumers face when translating intentions into actions.

Additionally, according to behavioral reasoning theory (Westaby, 2005), it is crucial to consider context-specific reasons to comprehensively understand customer decision-making. Given the context in which this study's data was collected from mainland China in the summer of 2020, social distancing measures caused by the COVID-19 pandemic may act as obstacles to translating positive WOM intentions into actual consumption behavior. As Zhou et al. (2023) demonstrated, such social distancing measures especially limited Chinese people's physical mobility for everyday activities, including shopping, owing to fear and concerns about crowded places in the early stages of the COVID-19 pandemic.

Building on the above rationale and contextual specificity, this study is novel in effectively extending previous research by identifying the moderating role of frontline employees' personal interaction as a boundary condition to bridge the gap between customers' positive WOM intentions and actual behavior from the sender's perspective. Given a report indicating that approximately 70% of consumers in China are likely to resume offline shopping as frequently as before, once COVID-19 restrictions ease (Statista, 2024), we anticipate that the pivotal role of personal interactions with frontline employees, as highlighted in our study, will become even more significant. This offers valuable insights for understanding the relationship between WOM and actual purchase behaviors among Chinese consumers in the post-pandemic era. Moreover, this study addresses the limitations of recent research by focusing on actual and practical consumer behavioral patterns, specifically purchase amount and visit frequency.

Second, this study contributes to the literature by examining whether, and how, the moderating effect of frontline employees' personal interactions on the relationship between positive WOM intention and actual consumption behavior depends on the strength of global product attachment. By applying attachment theory, we emphasize that customers with a strong attachment to global products heighten the positive interaction effect between favorable WOM intention and frontline employees' personal interaction only for the actual purchase amount (H3a).

One alternative explanation for the rejection of H3b could be the massive shift to online shopping due to the pandemic, which led to changes in customers' consumption cultures. Shen et al. (2022) reported that prior to COVID-19, most physical grocery store visits occurred more than once per week. However, during the pandemic, this frequency decreased significantly, with an increase in visits occurring once every two weeks or once a month. Conversely, in the case of online shopping, a noticeable difference from the pre-COVID-19 period was the increase in the number of consumers participating more than once a week during the pandemic. These indicators suggest that Chinese customers may hesitate to visit shopping malls frequently during the pandemic because of safety concerns, whereas the purchase amount may be less affected by these issues.

Applying the early insights that customers' expectations of frontline employees vary depending on their personal interest (Smith et al., 2018) to our study context, we provide a theoretical rationale suggesting that consumers with a strong emotional attachment to differentiated products offered by retailers, specifically global products, place a higher value on personal interaction with frontline employees who provide support during their shopping experience. This heightened value of personal interaction subsequently leads to an increase in purchase behavior. In addition, this study expands the behavioral reasoning theory literature, which argues that various contextual reasons must be considered together to understand consumer decision-making, by empirically revealing the specific consumption behavior for which the moderating effect of global product attachment is effective.

5.2. Managerial implications

This study also has implications for retailers in improving their competitive edge, fostering long-lasting customer connections, and promoting sustainable growth in a fast-changing business landscape. First, retailers should encourage and equip their frontline employees with the tools they need to deliver top-notch customer service. According to the self-expansion theory, which serves as the theoretical foundation for emphasizing the role of frontline employees, fulfilling individuals' motivation for self-improvement through intimate relationships not only triggers positive emotions but also enhances relationship quality (de Kerviler and Rodriguez, 2019). Our primary findings demonstrate that when customers engage in active interactions with frontline employees, it significantly boosts their WOM intention to increase both their purchase amount per shopping trip and their frequency of visiting the shopping room. Therefore, it is imperative for retailers to equip frontline employees with adequate training, resources, and autonomy to deliver exceptional in-store customer experiences, which ultimately contribute to improved performance.

It is crucial for retailers to invest in continuous development programs aimed at enhancing their interpersonal skills, problem-solving abilities, and product knowledge. As the final point of contact for customers at the retail level, frontline employees assume a critical role in cultivating authentic connections. They are encouraged to actively engage with customers, understand their preferences, and facilitate opportunities for customers to learn about global product offerings. These proactive efforts not only fulfill customers' immediate needs but also contribute to enhancing their self-concept, as outlined in self-expansion theory. It is further important for retailers to acknowledge and reward employees who consistently exceed customer expectations and embody the organization's values. By prioritizing employee empowerment and fostering a customer-centric culture, an organization can differentiate itself in the market, generate positive WOM, and build long-term customer relationships.

Second, retailers should recognize the growing significance of global products in shaping customer attachment and consumption behavior within shopping malls. Our main finding is that understanding the impact of customers' global product attachment is crucial because it increases their purchase amount per shopping trip when positive WOM intention and frontline employees' personal interactions are present.

Attachment, through the lens of attachment theory, occurs when consumers have deep emotional connections with a select few objects that hold significant meaning, as opposed to a positive attitude, which consumers may have toward many objects that have less impact on their daily lives (Aboulnasr and Tran, 2020). Therefore, retailers can develop targeted marketing campaigns by identifying and leveraging factors that contribute to customers' emotional attachment to global products which are perceived as novel and innovative. These campaigns can highlight the unique benefits and features of global products, tailored to appeal to specific customer segments.

Retailers can increase the appeal of global products by incorporating storytelling techniques and user-generated content that highlight real-life experiences and testimonials. This can be done in collaboration with influencers, brand and cultural ambassadors, and satisfied customers to amplify the visibility and desirability of products among target audiences. Additionally, creating opportunities for customers to engage with products in store through experiential events, product demonstrations, and sampling initiatives can enhance their attachment to the products. Thus, retailers can strengthen the effectiveness of positive WOM and frontline employees' personal interactions in driving customers' consumption behavior.

6. Conclusions, limitations, and future research

In contrast to prior research, which heavily investigated the effects of WOM on receivers, this study's purpose is to investigate the relationship between customers' positive WOM and their actual behavior by considering frontline employees' personal interactions with customers and their global product attachment. Our main findings highlight that while customers' active interactions with frontline employees enhance the influence of their positive WOM intention on both purchase amount and visit frequency, customers with high attachment to global products heighten the positive interaction effect of positive WOM intention and frontline employees' personal interaction on purchase amounts only. Given the scarcity of research examining the influence of participation in WOM on the purchase behavior of the participants, these findings have implications for both domestic and global retail companies in terms of effectively managing customer WOM, especially from a sender's perspective.

However, this study had several limitations that warrant further investigation. First, it is challenging to enhance the sampling technique and accuracy of data collection. Given our results and the interpretation of our findings, although we attempted to control for potential heterogeneity among respondents, future research should carefully consider sample selection criteria to obtain non-biased and more generalizable results, such as consumer preferences for online vs. offline shopping channels in our current research context. Additionally, although this study endeavored to incorporate existing scale elements (Dabholkar et al., 1996) into the research context to the greatest extent possible, the standardized coefficient of one item for the construct of frontline employees' personal interaction (0.476) in Table 4 fell slightly short of the threshold of 0.5. Subsequent research could refine the measurement scale components for this construct in diverse retail settings across various countries using precise survey methodologies and analytical approaches.

Second, although purchase amounts and visit frequencies are commonly analyzed, shoppers at retail shopping malls vary in their behavioral patterns. Future studies could extend our conceptual model by testing broader aspects of shopping behavior (e.g., number of shops visited and hours spent in malls) and purchase behavior (e.g., number of shops and items purchased; Pare and Pourazad, 2017). By doing so, researchers can identify common patterns and shopping mall retailers' specific factors that influence consumer behavior.

We suggest three areas for future research. First, future investigations will need to integrate our two primary theoretical frameworks—self-expansion theory and attachment theory—into a cohesive and robust theory. In our study, we distinguished the subjects for self-expansion and attachment, linking them to interpersonal interactions with frontline employees and global products, respectively. However, in future research, synthesizing the effects of critical factors that impact customers' actual purchasing behavior in offline retail settings into a unified theory could substantially advance the literature.

Second, future research could explore potential moderating factors such as personality traits (e.g., warm relationships vs. avoidance, as discussed by Vlachos and Vrechopoulos, 2012), cross-cultural characteristics (e.g., consumer ethnocentrism, Han and Guo, 2018; consumer xenocentrism, Mueller et al., 2016), different types of retail affiliations (e.g., domestic vs. global companies), diverse merchandise experiences (e.g., luxury vs. commodity products), and situational factors that may influence consumers' purchasing habits. By considering these variables and also integrating both perspectives of WOM effects on receivers and senders, a more comprehensive conceptual framework can be developed to offer a better understanding and further extend the baseline relationship between WOM communication and consumer responses.

Third, the cross-sectional study design used in the early stages of the COVID-19 pandemic (Zhou et al., 2023) may have limited the ability to investigate the temporal dynamics and causality among variables. By contrast, a longitudinal analysis could provide valuable insights into how consumer behavior evolves over time and the long-term effects of positive WOM intention, frontline employee interactions, and global product attachment. Researchers can implement longitudinal data analysis to track changes in consumer behavior and the underlying mechanisms driving these changes. For instance, a survey using the same questionnaire in the same research context could compare the longitudinal results of causal pathways before and after the post-COVID-19 pandemic.

CRediT authorship contribution statement

Woo Bin Kim: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Project administration, Investigation, Data curation, Conceptualization. **Changju Kim:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **I. Go:** Writing – review & editing, Writing – original draft, Visualization, Validation, Resources, Investigation, Conceptualization. **Reo Fukuda:** Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Investigation, Conceptualization. **Marina Imai:** Writing – review & editing, Writing – original draft, Visualization, Validation, Investigation, Conceptualization.

Declaration of competing interest

The authors have no conflicts of interest to declare that are relevant to the content of this article.

Data availability

Data will be made available on request.

Appendix A. Additional information on regression analysis results using unstandardized coefficients (n = 521)

Independent variables (IV)	Actual consumption behavior (= Dependent variables, DV)							
	(a) Purchase amount (per shopping trip)				(b) Visit frequency (in a month)			
	Full model*	SE	*t*-value	*p*-value	Full model*	SE	*t*-value	*p*-value
Intercept	486.539**	152.468	3.191	0.002	3.187***	0.367	8.672	<0.001
Direct effects								
H1. Positive WOM intention (PWOM)	68.392	76.225	0.897	0.370	0.319	0.184	1.737	0.083
Frontline employees' personal interaction (FEPI)	71.337	92.222	0.774	0.440	−0.113	0.222	−0.510	0.610
Global product attachment (GPA)	13.735	51.224	0.268	0.789	0.074	0.123	0.598	0.550
Two-way interaction effects								
H2. PWOM × FEPI	240.759*	100.175	2.403	0.017	0.584*	0.241	2.418	0.016
PWOM × GPA	38.029	73.194	0.520	0.604	−0.135	0.176	−0.763	0.446
FEPI × GPA	95.075	88.087	1.079	0.281	−0.075	0.212	−0.355	0.722
Three-way interaction effect								
H3. PWOM × FEPI × GPA	309.704**	100.910	3.069	0.002	−0.173	0.243	−0.711	0.477
Control variables								
Gender	−95.498	92.750	−1.030	0.304	0.087	0.224	0.389	0.698
Age_20s	−249.482	168.013	−1.485	0.138	−0.375	0.405	−0.926	0.355
Age_30s	−253.869	196.429	−1.292	0.197	−0.596	0.473	−1.260	0.208
Age_40s	−515.224*	199.967	−2.577	0.010	−0.143	0.482	−0.296	0.767
Above age_50s	−488.799*	221.606	−2.206	0.028	−0.763	0.534	−1.429	0.154
Annual income	323.834**	101.170	3.201	0.001	0.493*	0.244	2.023	0.044
Retail affiliation	196.256	102.781	1.909	0.057	0.549*	0.248	2.216	0.027
Marital status	250.681	133.804	1.873	0.062	0.227	0.322	0.705	0.481
R	0.333***			<0.001	0.227*			0.029
R^2	0.111***			<0.001	0.051*			0.029

Note: *Estimation results of full model present unstandardized coefficients; SE = Standard errors of coefficients; While variance inflation factors (VIF) values range from 1.082 to 4.169, values of Durbin Watson statistic range from 1.927 in the model of purchase amount to 2.059 in the model of visit frequency.; *$p < 0.5$, **$p < 0.01$, and ***$p < 0.001$.

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